and apply specific preventive measures (contact isolation) applied to identified carriers, especially in the critical care setting. Second, eradicating carriage of multi-resistant bacteria may reduce the rates of infection. However, no controlled studies are available indicating that this approach may work. Third, strict compliance with standard precautions and hand hygiene could prevent most cases of cross-transmission, even without the need for recognition of individual carriers of resistant microorganisms. Unfortunately, many studies have shown that compliance of healthcare workers with hand hygiene recommendations remains low. Implementing alcohol-based hand rinses can improve compliance and decrease cross-infection. Finally, antibiotic selection pressure contributes to the increase in prevalence of multi-resistant Gram-negative bacteria. Data from several recently published studies suggest that restriction of certain classes of antibiotics may decrease rates of multi-resistant Gram-negative bacteria in the hospital setting. Other well-designed investigations are needed to confirm that reduction in antimicrobial overuse has a favorable effect on infection rates caused by multi-resistant Gram-negative bacteria.

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Overcoming the Challenges of Pertussis Control (invited)

10.001

Burden of Pertussis Worldwide: Strategies to Reinforce Pertussis Control in Children, Adolescents, and Adults

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Pertussis disease is a significant cause of morbidity and mortality amongst the unimmunised or insufficiently immunised. Data on pertussis disease trends will be presented. As for solutions, in spite of immunisation campaigns targeted at parents of infants and children, there are still major problems with. Strategies to reduce the burden of pertussis disease include; universal adult immunisation, selective immunisation of mothers and close family contacts of newborns, selectiveimmunisation of health care workers, selective immunisation of child care workers, universal immunisation of adolescents, pre-school boosters at 4—6 years of. No single strategy is likely to be appropriate for all. Data on pertussis disease and discussion around these public health policy issues for the prevention of pertussis will be discussed.

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Pertussis Control in Infants and Children

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In the prevaccine era, pertussis was one of the most common childhood bacterial infections with more than half of children becoming infected before school age. The disease was one of the leading causes of infant death in the 19th century.

The introduction of whole-cell pertussis vaccine in the 1940s and its subsequent widespread use globally has resulted in a reduction in the incidence, morbidity and mortality of this disease. The whole-cell pertussis vaccine was nevertheless associated with frequent local and systemic adverse reactions, occasionally some that were more severe such as febrile seizures or hypotonic-hyporesponsive episodes. The shift, in the 1990s, from whole-cell pertussis vaccine to less reactogenic acellular pertussis vaccine was associated with significantly reduced rates of vaccine-associated adverse events. In recent years, acellular pertussis vaccine has been incorporated into the immunization schedules of many developed countries, gradually replacing whole-cell pertussis vaccine. Dosing schedules vary between countries. As it has become apparent that the epidemiology of pertussis is gradually shifting to the adolescent and adult age groups, many countries are augmenting their program of immunization by having introduced, or are planning to introduce, an acellular pertussis vaccine booster dose for use in children 6 years of age or in the adolescent age group.

The use of combination vaccines with inclusion of acellular pertussis vaccine in many countries has been proven to be efficacious and prevents children from undergoing an excessive number of injections. The individual components included in these combination vaccines can be adjusted according to differences in the burden of disease in different countries.

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10.003

The Role of Pertussis Booster Vaccinations in Adolescents and Adults

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In most developed countries, long-standing vaccination programs for infants and young children have led to substantial decreases in pertussis disease since their introduction in the 1940s. More recently, however, there has been a resurgence of pertussis case reports, most notably among adolescents and adults. Immunity from childhood pertussis vaccinations wanes after several years, but natural boosting through repeated subclinical infection is now uncommon; most adolescents and adults are again susceptible to pertussis. Manifestations of pertussis in these age groups are highly variable, ranging from mild symptoms unlikely to prompt medical care through typical whooping cough. Complications are common and include sleep